Science, Society, and America's Nuclear Waste REVIEW TEST • UNIT 3 NAME Directions: Circle the letter of the answer that best completes the statement given. 1. The Nuclear Waste Policy Act of 1982 and Amendments Act of 1987 are laws that establish a national policy for the: a. future of nuclear power generation in the United States. b. storing, transporting, and disposing of high-level nuclear waste. c. environmental clean-up of our Nation's defense facilities. d. disposal of low-level nuclear waste and mill tailings. United States scientific researchers currently favor _____as the preferred long-term method of high-level waste disposal. a. shallow land burial b. underground tanks c. deep geological burial d. above-ground barrels Studies that will NOT be a part of the U.S. Department of Energy's (DOE's) site 3. characterization process at Yucca Mountain, Nevada, are: a. hydrologic, geologic, and geochemical characteristics of the site. b. social impacts of the repository. c. economic impacts of the repository. d. feasibility of a monitored retrievable storage facility at the site. 4. If the president recommends Yucca Mountain to the Congress as the site for the repository, and Nevada has NOT entered into a Benefits Agreement, the State of Nevada can: a. appeal to the Nuclear Regulatory Commission (NRC). b. submit a notice of disapproval to the Congress. c. appoint a special prosecutor to investigate the U.S. Government. d. conduct its own study of the site. 5. A Benefits Agreement between the State of Nevada and the DOE would: a. result in Nevada's giving up its right to disapprove the site recommendation. b. create a mechanism by which Nevada could also host a monitored retrievable storage system. c. result in the creation of a Nuclear Waste Technical Review Board. d. ensure that DOE will comply with existing transportation laws and regulations.

In February 1983, the Department of Energy named _____ potential sites for a permanent

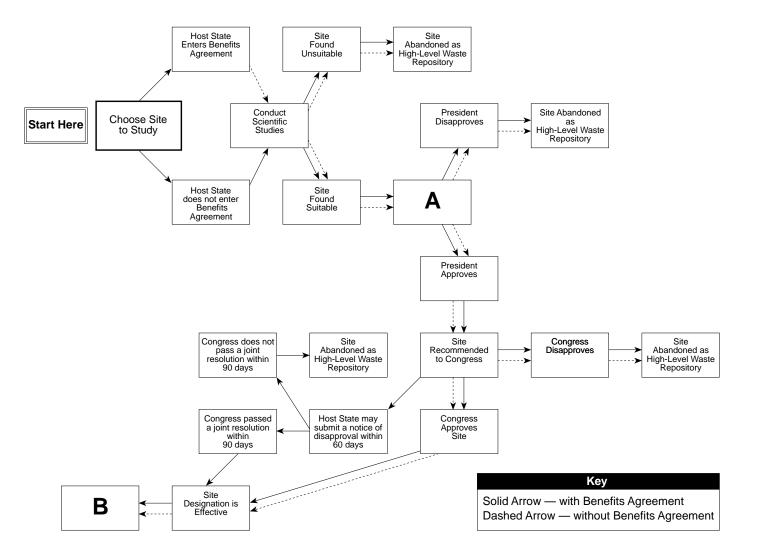
geologic repository.

a. twenty-five

b. ninec. oned. six

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- 7. Spent fuel will be transported to storage facilities in:
 - a. tanks.
 - b. barrels.
 - c. casks.
 - d. crates.
- 8. The source of the funds that will cover the costs of disposal of spent fuel from nuclear powerplants is:
 - a. State taxes.
 - b. the U.S. Internal Revenue Service.
 - c. utilities using nuclear powerplants.
 - d. income taxes.



Use the flow chart above to answer questions 9 and 10.

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- 9. Which of the following would be appropriate in box A?
 - a. site abandoned as a high-level waste repository.
 - b. DOE applies to the NRC for construction authorization.
 - c. DOE recommends the site to the President.
 - d. the President disapproves the site.
- 10. Which of the following would be appropriate in box B?
 - a. site abandoned as a high-level waste repository.
 - b. DOE applies to the NRC for construction authorization.
 - c. DOE recommends the site to the President.
 - d. the President disapproves the site.
- 11. Present laws governing the disposal of nuclear waste:
 - a. cannot ever be changed.
 - b. can be amended by DOE.
 - c. can be amended by the President.
 - d. can be amended by Congress.
- 12. Casks for transporting spent fuel must be certified by the:
 - a. Nuclear Regulatory Commission (NRC).
 - b. Department of Energy (DOE).
 - c. Department of Transportation (DOT).
 - d. Environmental Protection Agency (EPA).
- 13. New shipping casks with increased fuel carrying capacities are being designed because:
 - a. they may be less expensive than existing casks.
 - b. they may be more expensive than existing casks.
 - c. they will decrease the total number of waste shipments necessary.
 - d. they will increase the total number of waste shipments necessary.
- 14. The Office of the Nuclear Waste Negotiator expired or will expire in:
 - a. January 1995.
 - b. has not expired.
 - c. March 2010.
 - d. September 1993.

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- 15. Disposing of spent fuel and high-level waste is expensive. What is one way that the U.S. Government plans to respond to this problem?
 - a. requiring all States to contribute funds to the civilian radioactive waste management program.
 - charging hazardous materials carriers an insurance fee for transporting high-level nuclear waste.
 - c. increasing State income taxes.
 - d. requiring the U.S. government to pay the costs for disposing of defense high-level waste.
- 16. An example of a technical issue relating to the disposal of nuclear waste is:
 - a. designing a cask that will keep radioactive material from reaching the environment.
 - b. concern of local residents for the health of themselves and their families.
 - c. improved local economy.
 - d. increased local population.
- 17. An example of a societal issue relating to the disposal of nuclear wastes is:
 - a. designing a cask that will keep radioactive material from reaching the environment.
 - b. concern of local residents for the health of themselves and their families.
 - c. developing models of ground water movement patterns.
 - d. understanding host rock response to thermally hot waste canisters.
- 18. Constructing the Nation's first high-level nuclear waste repository is a complex task and involves all of the following <u>EXCEPT</u>:
 - a. a detailed program for the safe storage of low-level waste.
 - b. a program for inspection of activities affecting quality on the site.
 - c. a program to test that all structures and systems work satisfactorily.
 - d. a defined, controlled, and verified repository design.
- 19. Ensuring public confidence of the safety of disposal of spent fuel and high-level nuclear waste is part of the complex of managing and disposing of high-level waste. Which of the following will help ensure public confidence?
 - a. monitoring the transportation of low-level waste.
 - b. requiring utilities to pay a fee for all electricity generated by nuclear energy.
 - c. requiring independent review of all aspects of the waste disposal program.
 - d. regulating the disposal of transuranic waste.
- 20. What will be studied to determine the impact of a repository on the economy of the host State?
 - a. endangered animals and plants in the vicinity of the site.
 - b. ground water flow patterns at the site.
 - c. geologic formations at the site.
 - d. numbers and types of jobs that will be created or lost.